

WHAT IS CLAIMED IS:

- 1 1. A method of de-blurring a segment of an image, the method
2 comprising:
3 selecting the segment;
4 identifying pixels of interest near a boundary of the segment; and
5 calculating the blur contributions for the pixels.
- 1 2. The method of claim 1 further comprising:
2 subtracting the blur contributions from color vectors of the pixels to remove
3 blurring from the segment.
- 1 3. The method of claim 2, wherein calculating the blur contributions
2 comprises:
3 determining a first color vector relating to the segment;
4 determining a second color vector relating to at least one adjacent segment in
5 proximity to the pixels; and
6 determining a third color vector relating to the pixels.
- 1 4. The method of claim 2, wherein the blur contributions are in a same
2 direction as a first difference vector comprising the second color vector minus the first color
3 vector.
- 1 5. The method of claim 3, wherein the first color vector comprises a
2 representative color of the segment, the second color vector comprises a color contribution of
3 the at least one adjacent segment, and the third color vector comprises representative colors
4 of the pixels.
- 1 6. The method of claim 4, wherein the blur contributions comprise
2 projections of a second difference vector onto the first difference vector, and wherein the
3 second difference vector comprises the third color vector minus the first color vector.
- 1 7. The method of claim 4, wherein the blur contributions are proportional
2 to a blur coefficient.
- 1 8. The method of claim 7, wherein the blur coefficient comprises a first
2 dot product between the second and first difference vectors divided by a second dot product
3 between two first difference vectors.
- 1 9. The method of claim 7, wherein the blur coefficients are calculated by
2 an image processing apparatus.
- 1 10. The method of claim 7, wherein the blur coefficients are calculated by
2 a video processing apparatus.

- 1 11. The method of claim 7, wherein the blur coefficients are provided as
2 segment field data relating to the segment.
- 1 12. A method of blurring a segment of an image, the method comprising:
2 selecting the segment;
3 identifying pixels of interest near a boundary of the segment;
4 determining the blur contributions for the pixels; and
5 adding the blur contributions to color vectors of the pixels to add blurring to
6 the segment.
- 1 13. The method of claim 12, wherein calculating the blur contributions
2 comprises:
3 determining a first color vector relating to the segment;
4 determining a second color vector relating to at least one adjacent segment in
5 proximity to the pixels; and
6 determining a measure of blurring relating to the pixels.
- 1 14. The method of claim 13, wherein the blur contributions are in a same
2 direction as a first difference vector comprising the second color vector minus the first color
3 vector.
- 1 15. The method of claim 13, wherein the first color vector comprises a
2 representative color of the segment, and the second color vector comprises a color
3 contribution of the at least one adjacent segment.
- 1 16. The method of claim 13, wherein the measure of blurring comprises a
2 blur coefficient.
- 1 17. The method of claim 16, wherein the blur coefficients are calculated by
2 an image processing apparatus.
- 1 18. The method of claim 16, wherein the blur coefficients are retrieved
2 from segment field data relating to the segment.
- 1 19. An apparatus for determining blur contributions of a segment of an
2 image, the apparatus comprising:
3 means for selecting the segment;
4 means for identifying pixels of interest near a boundary of the segment; and
5 means for determining the blur contributions for the pixels.
- 1 20. The apparatus of claim 19, further comprising:
2 means for subtracting the blur contributions from color vectors of the pixels to
3 remove blurring from the segment.

- 1 21. The apparatus of claim 19, further comprising:
- 2 means for adding the blur contributions to color vectors of the pixels to add
- 3 blurring to the segment.